

5 **METHOD AND APPARATUS FOR
MINIMIZING SPECTRAL INTERFERENCE
DUE TO WITHIN AND BETWEEN SAMPLE VARIATIONS
DURING *IN-SITU* SPECTRAL SAMPLING OF TISSUE**

ABSTRACT

10 An apparatus and method for reproducibly interfacing a living tissue sample
to the measurement probe of a spectrometer instrument *in-situ* minimizes
spectral interference related to sampling variations. A minimal contact
subject interface includes supports replaceably mounted on a base. An
optical coupling means, such as a fiber optic probe, contacts the
15 measurement site through a probe aperture in the base. During use, a
subject rests an extremity on the support elements, so that the extremity is
reproducibly positioned and supported in relation to the optical coupling
means. The supports have a small contact area, minimizing contact with the
skin at the measurement site. The interface module is adjustable to fit any
20 subject.

By reproducibly positioning and supporting the body appendage using
minimal contact supports, spectral interference due to variations in
placement, applied pressure, and temperature transients secondary to
25 contact with the interface module are greatly minimized.